

REPLACEMENT CLAIMS

2. (amended) The method of claim 8 wherein the wet oxidation process is performed at a temperature in a range of about 450 °C to about 750 °C.

3. (amended) The method of claim 8 wherein the wet oxidation process is performed at a temperature in a range of about 750 °C to 950 °C.

4. (amended) The method of claim 8 wherein the oxidation process is carried out for a duration in a range of about 20 to about 60 seconds.

5. (amended) The method of claim 8 wherein subjecting the dielectric film to a wet oxidation includes heating a mixture of hydrogen and oxygen gases wherein the ratio of hydrogen to oxygen gases in the mixture is in the range of about 0.1 to about 0.5.

6. (amended) The method of claim 8 wherein subjecting the dielectric film to a wet oxidation includes heating a mixture of hydrogen and oxygen gases wherein the ratio of hydrogen to oxygen gases in the mixture is in the range of about 0.1 to about 0.8.

8. (amended) A method of fabricating a semiconductor device comprising:  
depositing an oxygen-deficient dielectric film having a dielectric constant of at least about 25 over an underlying layer;

subjecting the dielectric film to a wet oxidation in a rapid thermal process chamber at a temperature of at least about 450 °C and for a duration which increases the oxygen content of the dielectric film; and

subjecting the dielectric film to a heat treatment in an ambient comprising a stabilizing gas selected from the group consisting of N<sub>2</sub>, O<sub>2</sub>, O<sub>3</sub>, NO, and N<sub>2</sub>O.

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10. (amended) The method of claim 8 wherein subjecting the dielectric film to a heat treatment in an ambient comprising a stabilizing gas is performed prior to subjecting the film to the wet oxidation.

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11. (amended) The method of claim 8 wherein the wet oxidation is performed at a temperature less than the temperature for subjecting the dielectric film to a heat treatment in an ambient comprising a stabilizing gas.

12. (amended) The method of claim 8 wherein subjecting the dielectric film to a heat treatment in an ambient comprising a stabilizing gas is performed in the rapid thermal process chamber.

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